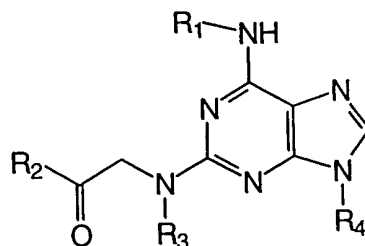


## ABSTRACT

Compounds of formula 1:



wherein

R<sub>1</sub> is alkyl, cycloalkyl, aryl, aralkyl, heteroaryl, or heteroaralkyl,  
substituted with 0-3 substituents selected from lower alkyl, halo, hydroxy,  
lower alkoxy, amino, lower alkyl-amino, and nitro;

R<sub>2</sub> is hydroxy, amino, or lower alkoxy;

R<sub>3</sub> is H, lower alkyl, lower acyl, lower alkoxy-acyl, or amino-acyl;

R<sub>4</sub> is H or lower alkyl;

and pharmaceutically acceptable salts and esters thereof;

are effective inhibitors of GSK3.

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